

REMARKS

*The Claim Amendments*

Applicant has amended dependent claims 47-56 to improve their form and properly depend them from currently pending independent claims 45 or 46.

None of the amendments constitutes new matter. Claims 45-56 are now pending in this application.

*The Species Election Requirement*

The Examiner has required an election of a single species under 35 U.S.C. §121 and an identification of the claims readable on the elected species, including any new claims, to which the claims shall be restricted if no generic claim is held to be allowable. The Examiner states that the invention contains the following distinct species:

A) Claim 50, in part: the environmental parameter of interest is a subsurface oil.

B) Claim 50, in part: the environmental parameter of interest is a natural gas deposit.

C) Claim 51, in part: the environmental parameter of interest is a dynamic change that occurs during an oil and gas deposit's development that affects its hydrocarbon composition.

D) Claim 51, in part: the environmental parameter of interest is a dynamic change that occurs during an oil and gas deposit's development that affects its migration.

E) Claim 51, in part: the environmental parameter of interest is a dynamic change that occurs during an oil and gas deposit's development that affects its depletion.

F) Claim 51, in part: the environmental parameter of interest is a dynamic change that occurs during an oil and gas deposit's development that affects its hydrogen sulfite(sic) sulfide production.

G) Claim 52: the environmental parameter of interest is a mineral deposit.

H) Claim 53: the environmental parameter of interest is an indicator of the mineral deposit's composition.

I) Claim 54: the environmental parameter of interest is an agricultural pest.

J) Claim 55: the environmental parameter of interest is an industrial organic chemical.

K) Claim 56: the environmental parameter of interest is water.

The Examiner states that upon allowance of a generic claim, applicant will be entitled to consideration of dependent claims to additional species.

Applicants elect the claims of Group B (claim 50, in part), with traverse, for substantive examination in this application. Claims 45-50, which are all directed to methods of identifying environmental parameters of interest by identifying the presence and abundance of a nucleic acid marker sequence wherein the environmental parameter of interest is a natural gas deposit, are pending. Examination of this application should proceed on the basis of those claims.

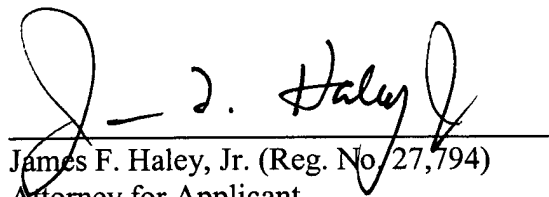
Applicants believe that a separate election between a subsurface oil and a natural gas deposit is improper. This is evidenced in part by the fact that many of the other species (i.e., groups C through F) comprise a change that occurs during an "oil and gas deposit's" development. Moreover, the specification teaches that oil and gas reservoirs often exist together,

as migrating hydrocarbons. See, page 30, lines 11-27, teaching that when oil is formed it undergoes a vertical migration to the earth's subsurface layer where it evaporates as a gas. A subsurface oil, therefore, will naturally comprise natural gas deposits. In addition, the specification also teaches on page 32, lines 10-12 that "*crude oil and natural gas are composed of a complex mixture of hydrocarbons* including straight chain hydrocarbons of lengths generally between 2-40 carbon atoms." Given this teaching, applicant submits that species B and C, the subsurface oil or natural gas deposit environmental parameters of interest of claim 50, should be examined together.

Applicants make this election expressly without waiver of their right to file for and to obtain claims directed to the non-elected subject matter in divisional or continuing applications claiming priority and benefit herefrom, or, subject to allowance of generic claim, to rejoin the other claims depending from or otherwise including all the limitations of the allowable generic claim in this application.

Applicants request favorable consideration and early allowance of the elected claims.

Respectfully submitted,



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